

Notice of Allowability

Application No.

10/655,321

Examiner

Manuel L. Barbee

Applicant(s)

WATSON ET AL.

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to papers filed 23 February 2006.
2. ☒ The allowed claim(s) is/are 27,28,32-34 and 62.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows: Cancel claims 19, 20, 23, 24, 45, 49, 50 and 63-66 in view of the Board of Patent Appeals and Interferences Decision on Appeal mailed 11 May 2006.

Allowable Subject Matter

2. Claims 27, 28, 32-34 and 62 are allowed.

3. The following is an examiner's statement of reasons for allowance:

None of the cited prior art teaches a system for measuring an uncertainty window of a target clock signal of a microprocessor that include: a measurement circuit on the die of the microprocessor; an external measurement system coupled to the measurement circuit by way of a scan chain of the microprocessor, and wherein the external measurement system executes software that controls the measurement circuit through the scan chain; wherein the external measurement system adjusts a phase relationship of a plurality of reference clock signals having varying phase, the plurality of reference clock signals define a plurality of time windows between corresponding features; and wherein the measurement circuit compares the target clock signal to the plurality of time windows to determine the uncertainty window of the target clock signal, as shown in claim 27.

None of the cited prior art teach a method for calibrating a measurement circuit in a system for measuring on the die of the electronic device an uncertainty window that includes generating a first and second calibration signal each with the same frequency but differing in phase relationship by a known time, phase locking the output of a programmable delay chain to the first calibration signal and noting the number of taps required to phase lock the first calibration signal, phase locking the output of the programmable delay chain to the second calibration signal and noting the number of programmable taps required to phase lock the second calibration signal, attributing the difference in the number of taps to the known period of time and attributing each tap to a portion of the known period of time, as shown in claim 33. None of the cited prior art teaches a method comprising generating on a microprocessor die first and second reference clock signals having the same frequency but differing in phase relationship, defining a time window between features of the first and second reference clock signals, comparing a plurality of cycles of a target clock to the reference clock signals to determine whether the clock signal makes state transitions within the time window, adjusting the phase of only one of the first and second reference clock signals to adjust the time window and repeating the comparing and adjusting to determine an uncertainty window, as shown in claim 62..

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

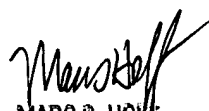
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manuel L. Barbee whose telephone number is 571-272-2212. The examiner can normally be reached on Monday-Friday from 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Manuel L. Barbee
Examiner
Art Unit 2857

mlb
August 18, 2006


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800